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NY-LU-12	KEESPPPKVVNPLIGLICGYGSDYEEEEEQTPPPQPRTAQPPQKREEQTKKENEEDKLTWNKLA CLICRRQFPNKEVL	970
LUCA15	PELVVRNGDEENPLKRGVAAAYS GSDNEE.....ELVERLESEEEKLADWKMACLICRRQFPNKDAL	662
DXS8237E	DLPKLASDDRPSPRGLVAAAYS GSDSEE.....EQERGPEREKLTDWQKLA CLICRRQFPNKEAL	233
NY-LU-12	IKHQQLSDLPKQNL EIHRRKTKQSEQELAYLERERE.GKFKGRGNDRREKLQSFDSPEKRRKIKYSRETDSD..DRKLV D KEDID	1050
LUCA15	VRHQQLSDLHKQNM DIYRRSRLSEQELEALELRERE.MKYRDRAAERREKYGIPEPPEPKRKKQFDAGTV..NYEQPTKDGID	742
DXS8237E	IRHQQLSGLHKQNL EIHRRRAHLSENELEALEKNDMEQMKYRDRAAERREKYGIPEPPEPKRKKYGGISTASVD FEQPTRDGLG	316
NY-LU-12	TSSKGGCVQQA TGWRKGTGLGYGHPGLASSSEEAEGMRGSPSVGASGRTSKRQSNETYRDAVRRVMFARYKELD	1123
LUCA15	HSNIGNKMLQAMGWREGSGLGRKCQGITAPIEAQVRLKGAGLGAKGSAYGLSGADSYKDAVRKAMFARFIEME	815
DXS8237E	SDNIGSRMLQAMGWKEGSGGLGRKKQGIPTPIEAQTRVRGSGLGARGSSYGVTSYKETLHKTMVTRFNEAQ	389

Fig. 1



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100 AAGGAGGAGCGGGCCGTGGAGGCTTCGCCCCCTAGGTACTGCTATAACCAGAAATTTGGTAFAAAAAAGGATTACTTGTGGGGCCCTCTTGTATAAAAAAGA
200 GATGTGGGGGATTCCTCACCTGCTAACAGAACTGCACCTTTTCGTGGGAGCCCAAGAAAGTTTCTCCCGGTGGAACAGGGATTATCCTCCTCCT
300 M M G D S R P A N R T G P Y R G S Q F E R F A P S N H R D Y P P P
340 CCCCTAAGAGTATGCTCAAGAGAGACACTCTGCGAACTTCTCTGGCAGAGATTCACTTCCCTTGAATTCAGGGGCAATTCGGGGCCCTCCTTTTGC
400 P I K S R A Q E R D S G R F P G R D S L P F D F Q G H S G P P F A
460 ATGTAGAGGAGCATTCCTTTCAGCTATGGAGCTAGAGAGGACCGCATGCTGCTATCGAGGGGAGGACCTGGACATGATTCAGGGGGGGGAGATT
500 H V E E H S F S Y G A R Q G P H G D Y R G G K G P G R D F R G G D F
560 TTCGTCCTCTGATTCCTCAGAGCAGAGATTTCATCACAGTTGACCTTCAGGGGTAGGAGATACATCTCTGGGATTTTCGGGATAGAGAGGACCACTATG
600 S S S D F G S R D S S Q L D F R G R D T H S G D F R E R E G P P G
660 GACTATAGGGGTGGAGGGTACTTCTATGGATTATAGAGGTAGGAGGACCTCATATCACTACAGAGACAGGGATGCTCAGCTCTTGTACTTCAGAG
700 D Y R G G D G T S M D Y R G R E A P H H N Y R D R D A H A V D F R
760 GTAGGGATGCTCTCCATCTGACTTCAGGGCCGGGGACTTATGATTTAGATTAGATTTAGAGCCCGGATTTGATCCCATGCAGATTTTAGGGAGGGGATTT
800 G R D A P P S D F R G R G T Y D L D F R G R D G S R A D F R G R C L
860 ATCAGATTTCGATTTAGGGCCAGAGAACAGTCCCGTCTCTGATTTTAGGAATAGAGATGATCTGATTTTCGACTTTAGAGACAAAGACGGAACACAAGTA
900 S D L D F R A R E Q S R S D F R N R D V S D L D F R D K D G T Q V
960 GACTTTAGAGCGCGAGTTCAGGTACTACTGATCTAGACTTTAGGACAGGGATACCGCCACATTCAGATTTTCAGAGGTAGACACCGATCTAGGACTGATC
1000 D F R G R G S G T T D L D F R D R C T P H S D F R S R H R S R T D
1060 AGGATTTAGGGCCAGAGAGATGGGATCTTGTATGGAATTTAAAGATAGGAGATGCCCTCTGGATCCAAATATTTGGATTACATTCAGCCCTCTAC
1100 Q D F R G R E M G S C M E F K D R E M P P V D P N I L D Y I Q P S T
1160 ACAAGATAGAGAACATTCGTGATGAATGTGAACAGAGAGAGAAATCCACACAGCACCATACGATAGAAAGCCCTGCTTTTGGCATTCAGAGGGAGAA
1200 Q D R R E S G H N V N R R E K S T H D H T I F R P A F G I Q K G K

Fig. 2-1

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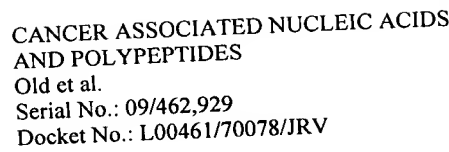
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1200
TTTGAGCATTCAGAAACAGAGAGAAACACAAAGGTGTAGCCTTTGAACATGAGTCTCCACAGACTTTTCAGAACAGCAAAAGTCCAGTTCACAGACC
334 F E H S E T R K G E T G G V A F E H E S P A D F Q N S Q S P V Q D
1300
AAGATAAGTCACAGCTTCTGGACGTGAAGACAGATTCAGATGCTGCTGTGTTAAAGAGCGCGGTCTGGACITTTCTTGGCGGCAAGACACCGA
367 Q D K S Q L S G R K K Q S S D A G L F K E E G G L D F A G R Q D T D
1400
TTACAGAAGCATGGAGTACCTGATGTGGATCAATAGGCTGCCAGGAAGCCACATGTTGGCTATGGCAGAGCAAGTCTTTCCAGAGGGCAAAACTGCC
401 Y R S N F Y R D V D H R L P G S Q N F G Y G Q S K S F P E G K T A
1500
CGAGATGCCCAACGGGACCTTCAGGATCAAGATTATAGGACCGGCCAAGTGAGGAGAAACCCAGCAGGCTTATTCGATTAAAGTGGGTACCTGAAGTG
434 R D A Q R D L Q D Q D T R T G P S E K K P S R L I R L S G V P K D
1600
CCACAAAGAGAGATTCTTAATGCTTTTCGGACTCCCTGATGGCATGCCCTGTAAAGAACTTGCAAGTGAAGAGTATAACACAGGTTACGACTATGGCTA
467 A T K E E I R N A F R T P D G M P V K R L Q L K E Y N T G Y D Y G Y
1700
TTCTCTGCGTGGAGTTTTCACCTCTTGGAAAGATGCCATCGGATGGATCGAGCCCAACCAAGCTTAATGATCAGGACAAAGAAAGTTACCTGGAGTAT
1659
501 V C V E F S L L E D A I G C M E A N Q G T L H I Q D K E V T L E Y
1800
GTATCAAGCCTGGATTTTGGTACTGCAAAACGATGTAAGGCAACATTTGGTGGCACCGATCTTCTGTTTCATTTCTCAAGAACCCCAAGAGAGTACAG
534 V S S L D F W Y C K R C K A N I G G H R S S C S F C K N P R E V T
1900
AGGCCAAGCAAGAAATAACCTACCTCAGCTCAGAAACATCCATACCAGCACCATTTGGAATAACAGCCCAACAGCCCTTAAGACCAGCTGATAA
567 E A K Q E L I T Y P Q P Q K T S I P A P L E K Q P N Q P L R P A D K
2000
GGAACTGAACCCAGGAAGAGAGGCAAGTCAAGTACGCTTAGACATCAAAAGAGAGAACAGAGTATCTGCTCTCTCGAAGGGAAGG
601 E P E P R K R E E G Q E S R L G H Q K R E A E R Y L P P S R R E G
2100
CCAACTTCCGAAGAGACCGAGAGGGAGTCAATGCTGTGGAGAGACACGACGATGGAGAGGAAACATCATCTGCTAAAGCTATCTATCTGTTCCA
634 P T F R R D R F R E S W N G E T R Q D G E S K T I M L K R I Y R S
2200
CACCACCTGAGGTGATGTGGAAGTGTGGAGCCCTATGTCCGCTTACTACTGCCAACGTCCTGATCAAGAACAGCAAGCCCTATGGGGCATAC
667 T P P E V I V E V L E P Y V R L T T A N V R I I K N R T G P M G H T

Fig. 2-2



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701	CTATGGCTTTATTGACCTCGACTCCCATGTGGAAGCTCTTCGTTGGTGAAGATCTTACAGAAACCTTGATCCGCCATTAGCATTTGATGGGAAGATGGTA	2300
	Y G F I D L D S H V E A L R V V K I L Q N L D P P F S I D G K M V	
734	GCTGTAAACCTGGCCACTGGAAACGAAAGAAATGATTCTGCCGACCATTTCTGACCACATGCAATTAATATCAGGGTAAATAATTTCCGAGATAGGAGGG	2400
	A V N L A T G K R R N D S G D H S D H M H Y Y Q G K K Y F R D R R	
767	GAGTGGCAGAAATTCAGACTGGTCTTCAGATACAAATCGACAAGGACAACAGTCATCTCTAGTGCTACATATATGATTCTGCTAGTGGTACTATTATTA	2500
	G G G R N S D W S S D T N R Q Q G Q Q S S S D C Y I Y D S A S G Y Y Y	
801	VGACCCCTFGCAGGAACCTTATTATGACCCCAATACCCAGCAAGAAGCTTATGTGCCCCAGGATCCTGGATTACCTGAGGAAGAAGAGATCAAGGAAAAA	2600
	D P L A G T Y Y D P N T Q Q E V Y V P Q D P G L P E E E I E E L	
834	AAACCCACAGTCAAGGAAGTCAAGTAGCAAGAAGAAATGTCTAAACAGATGGCAAGGAGGAAAAAAGACAGAGGAGTGACGAGGTTTCAGGGAATATC	2700
	K P T S Q G K S S S K K E M S K R D G K E K K D R G V T R F Q E N	
867	CCAGTGAAGGAAGCCCCCTGCAGAAGACGCTCTTTAAGAAGCCTCCTGCTCTACTGTGTAAGAAGGAGAGTGCCCCCTCCACCTAAAGTGGTAAACC	2800
	A S E G K A P A E D V F L K P L F P T V K K E E S P P P K V V H I	
901	ACTGATCGGCCTCTTGGTGAATAIGGACGAGACAGTCACTATGAGGAGGAAGAGGAGGAACAGACCCCTCCCCACGCCCCGCACAGCACAGCCC	2900
	L I G L L G E Y G G D S D Y E E E E E E Q T P P P Q P R T A Q P	
934	CAGAAGCGAGAGGACCAACCAAGAAGGAGAATGAAGAAGACAACTCACTGACTGGAATAAACTGGCTTGTCTGTTGTCAGAGGCAGTTTCCCAATA	3000
	Q K R E E Q T K K E M E E D K L T D W N K L A C L L C R R Q F P N	
967	AAGAAGTTCGATCAACACCAAGCAGCTGTCAGACCTGCACAAGCAAAACCTGGAATCCACCGGAAGATAAACAAGTCTGAGCAGGAGCTAGCCTATCT	3100
	K E V L I K R Q Q L S D L H K Q N L E I H R K I K Q S E Q E L A Y L	
1001	GGAAAGGAGAGAACGAGGGAAGTTTAAACGAAGAGGAATCATCCAGGGAAAAAGTCCAGTCTTTTGACTCTCCAGAAAGGAACCGATTAAAGTAC	3200
	E R R E R E G K F E G R D D D R R E K L Q S F D S P E R K R I K Y	

Fig. 2-3



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1034 TCCAGGGAACGACAGTGCATCGTAAACCTTGTTGATATAAGAGATATCGACACTAGCAGCAAGGAGGCTGTGTCCAACAGGCTACTGGCTGGAGGAAAG 3300
S R E T D S D R K L V D K E D I D T S S K G G C V Q Q A T G W R K
1067 GGACAGGCCCTGGGATATGGCCATCCTGGATTGGCTTCATCAGAGGAGGCTGAAGGCCCGGATGAGGGGCCCCAGTGTGGAGCCCTCAGGAAGAACCAGCAA 3400
G T G L G Y G H P G L A S S E E A E G R M R G P S V G A S G R T S E
1101 AAGACAGTCCAACGAGACTTATCGAGATGCTGTTCGAAGACTCATCTTTGCTCGATATAAGAACCTCGATTAAAGAGAGACAAAGTTCATGGGATACA 3500
R Q S N E T Y R D A V K R V M F A R Y K E L D ***
ACCTCCCTCTTTGTTTGTCTCTCCTTTTCTTTTGTGTTACTGTCTTGTGCTAGAACTTTTAAATAAACTTTTCAATGCTGATTAAAAAAA 3599

Fig. 2-4



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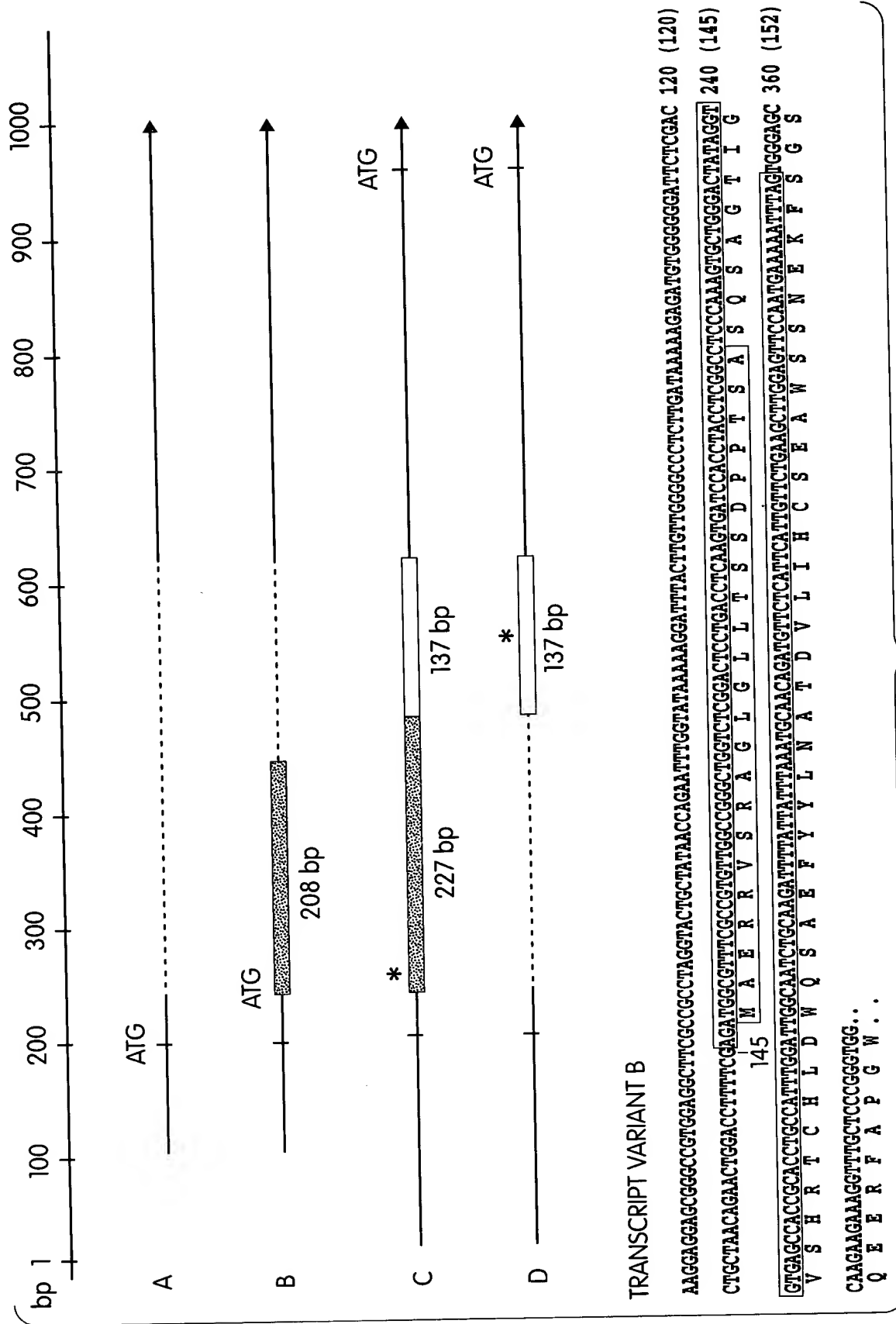


Fig. 3A



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227bp exon:
GACTGGGTGAAAGCTTTTCTGCAGCAGTCATGTTAAACCTTGTGTGACTTTCCTCGTGTCTGAAACTAAC
AGAACTGGACCTTTTCGGACTGGGTGAAAGCTTTTCTGCAGCAGTCATGTTGAAACCTTGTGTGACTTTCCTT
CGTGTCTGAAATGGGAGCATAAAGTTTACTCCGCCACTTCGTCTTAAATAGCAAACTTTTGCTGTTTCTGTCAG

137bp exon:
ATCTAGGACCTTGTACAGAACTCTGCCAAAAAAATGTTTACAGAGAATGTGCTGTGATTAGAGAAGAATA
TGCTGGTGTGTAGATTTCAAACTCTCTGGACAATATGAATAACACTGTCTTTGTTTCTACAG

Fig. 3B



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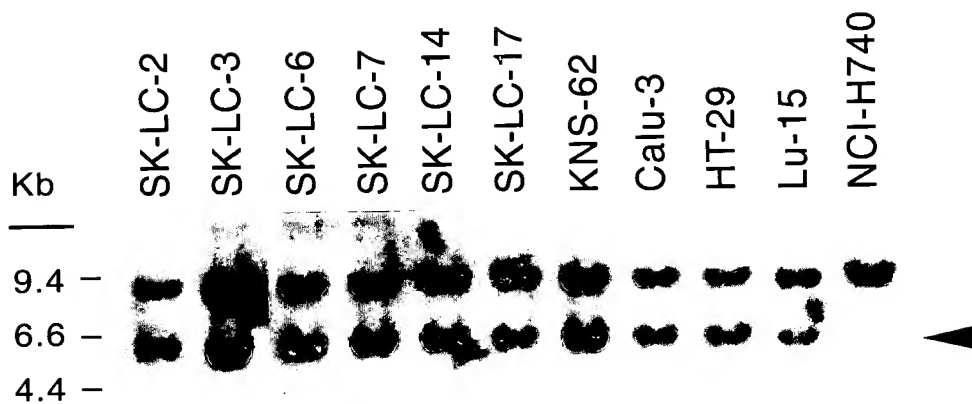
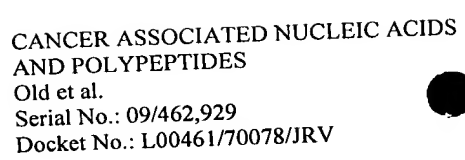


Fig. 4



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